

### **DETAILED ACTION**

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 05/27/10 has been entered.

The following office action is a responsive to the RCE filed, 05/27/10.

The RCE filed 05/27/10 in order to submit a new IDS filed 05/27/10, affects the application, 10/520,963 as follows: Upon further consideration of the new IDS it was determined that the notice of Allowance mailed 03/05/10 was not appropriate.

Consequently, a new ground rejection is set forth herein below.

The responsive to applicants' amendment is contained herein below.

Claims 1, 3-11, 13-26 and 31-38 are pending in application.

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

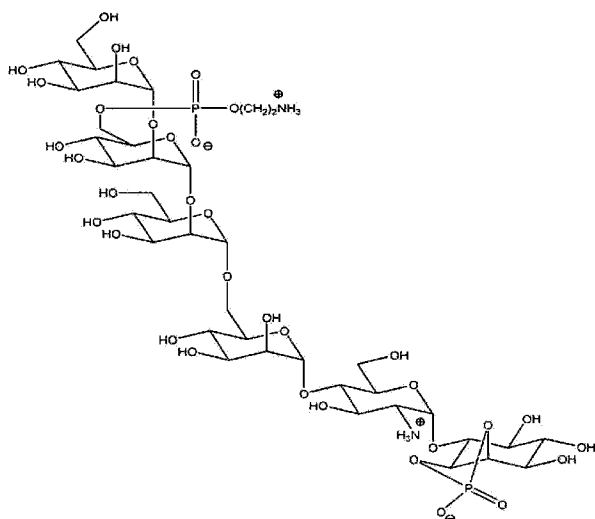
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 10, 19-26, 31-33 and 35-36 are rejected under 35 U.S.C. 102(b) as being anticipated by Schofield (US 2006/0147476 A1).

Claim 10 is drawn to a compound of a given structure. Schofield discloses applicant's compound of said given structure:

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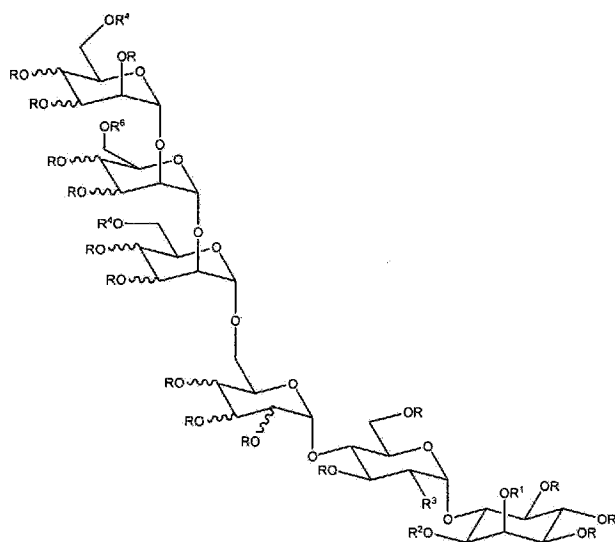


(see sheet 13, figure 13, compound 1 and page 5, paragraph [0056]).

Claim 19 is drawn to a method comprising forming a compound represented by a given formula. Schofield discloses applicant's method for the formation of the compound of said given formula wherein R is  $-\text{CH}_2\text{-aryl}$ ,  $\text{R}^1$  and  $\text{R}^2$  taken together are  $\text{C}(\text{CH}_3)_2$ ,  $\text{R}^3$  is  $\text{N}_3$ , and  $\text{R}^7$  is  $-\text{C}(\text{O})\text{-alkyl}$ ; It should be noted that  $\text{R}^6$  is alkyl and that iodosuccinimide and silver triflate are used in the method (see sheet 13, figure 13, the reaction of compound (3) and (4) to form compound (5); see also page 5, paragraph [0056]). Claims 20-26 which are further limitations of claim 19 are also anticipated by Schofield since Schofield discloses applicant's method wherein R is  $-\text{CH}_2\text{-aryl} = \text{benzyl}$ ,  $\text{R}^1$  and  $\text{R}^2$  taken together are  $\text{C}(\text{CH}_3)_2$ ,  $\text{R}^3$  is  $\text{N}_3$ , and  $\text{R}^7$  is  $-\text{C}(\text{O})\text{-alkyl}$  and  $\text{R}^6$  is alkyl = ethyl (see sheet 13, figure 13, the reaction of compound (3) and (4) to form compound (5); see also page 5, paragraph [0056]).

Claim 31 is drawn to a compound represented by formula I:

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**I**

Schofield discloses applicant's compound wherein R is H,  $R^1$  and  $R^2$  taken together are the  $P(O)OH$ ,  $R^3$  is amino, and  $R^4$  is H,  $R^6$  is  $P(O)(OR^5)_2$  and  $R^5$  is independently H and a substituted alkyl group (see sheet 19, the compound of figure 16).

Claims 32-33 and 35-36 which are further limitations of claim 31 are also anticipated by Schofield since Schofield discloses applicant's compound wherein R is H,  $R^1$  and  $R^2$  taken together are the  $P(O)OH$ ,  $R^3$  is amino, and  $R^4$  is H,  $R^6$  is  $P(O)(OR^5)_2$  and  $R^5$  is independently H and a substituted alkyl group (see sheet 19, the compound of figure 16).

### ***Claim Rejections - 35 USC § 103***

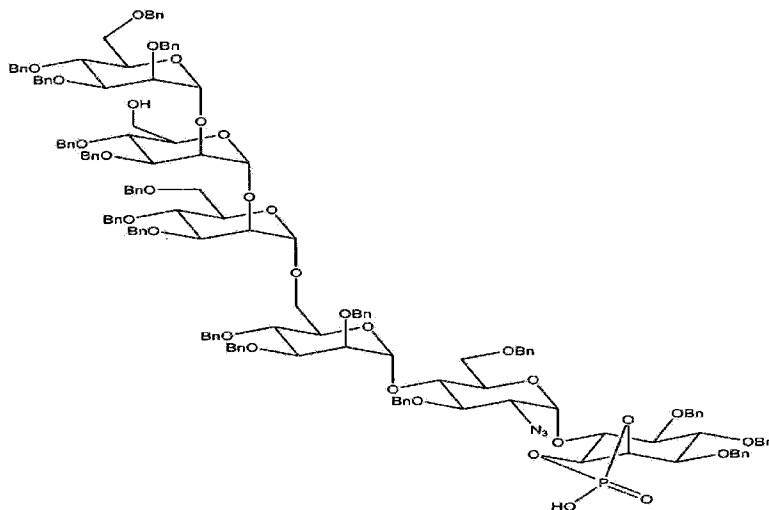
The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schofield (US 2006/0147476 A1).

Claim 10 is drawn to a compound including the compound of the given structure:



Schofield discloses a compound of a given structure (see sheet 13, figure 13, compound 10 and page 5, paragraph [0056]). Furthermore, Schofield discloses that a composition comprising an GPI inositolglycan domain derivative wherein the terminal inositol phosphate is substituted with inositol -1,2 cyclic phosphate is immunogenic (see page 3, paragraph [0088]).

The difference between applicant's claimed compound and the compound of Schofield is that for applicant's compound  $R^1$  and  $R^2$  taken together are  $C(CH_3)_2$  whereas for Schofield's compound  $R^1$  and  $R^2$  taken together are  $P(O)OH$  (i.e., forming an inositol -1,2 cyclic phosphate). However, Schofield discloses that the  $P(O)OH$  group is a preferred group since Schofield discloses that a composition comprising a GPI inositolglycan domain derivative wherein the terminal inositol phosphate is substituted with inositol -1,2 cyclic phosphate is immunogenic (see page 3, paragraph [0088]).

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It would have been obvious to one having ordinary skill in the art, at the time the claimed invention was made, to prepare a compound which has a P(O)OH group using Schofield's compound which has a C(CH<sub>3</sub>)<sub>2</sub> group in order to prepare an immunogenic GPI inositolglycan domain derivative with an inositol -1,2 cyclic phosphate.

One having ordinary skill in the art would have been motivated, to prepare a compound which has a P(O)OH group using Schofield's compound which has a C(CH<sub>3</sub>)<sub>2</sub> group in order to prepare an immunogenic GPI inositolglycan domain derivative with an inositol -1,2 cyclic phosphate.

#### ***Allowable subject matter***

Though the compounds of the present invention are similar to the compounds of the prior art, the compounds of claims 1,3-9,11,13-18 and 38 possess structural differences to the compounds of prior art documents and these differences are not suggested in the prior art, nor are obvious over the prior art. For example, the compounds of claims 1,3-9,11,13-18 and 38 contain different numbers of monosaccharide residues and different types of functional groups or moieties attached to their pyranose rings as compared to the compounds of the prior art. Also, claims 34 and 37 are objected to as being dependent upon a rejected base claim, but may be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael C. Henry whose telephone number is 571-272-0652. The examiner can normally be reached on 8.30am-5pm; Mon-Fri. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shaojia A. Jiang can be

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reached on 571-272-0627. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael C. Henry  
May 29, 2010.

/Shaojia Anna Jiang/  
Supervisory Patent Examiner  
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